

Work Order ID 129066

129066

Page 1

Wednesday, January 28, 2015 9:06:10 AM

Item ID: D3884-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Saddle, Inboard LH

Start Date: 1/28/2015 Start Qty: 8.00 *8*

Cust Item ID:

Required Date: 1/28/2015 Req'd Qty: 8.00 *8*

Customer:

Reference:

Approvals: Process Plan: MLS Date: 1501-28 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3884	<u>B</u> <u>REC</u>	<u>DAS</u> <u>9 15-05-22</u> <u>9-89</u>							

100

0.00

100

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

Program Batch No. 129066

Double check by: JFC

1-Machine Step No 1 per Folio FA818 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA818 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA818 and inspect per Dimension Sheets

15-01-21

12

φ

JFC 2015-04-23

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

150421

12

φ

JFC 2015-04-23

Work Order ID 129066

Wednesday, January 28, 2015 9:06:10 AM

129066

Page 2

Item ID: D3884-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, Inboard LH
 Start Date: 1/28/2015 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 1/28/2015 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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120	QC8- Inspect parts - second check	0.00							
120									DAS
QC	Memo	0.00				12	0		08
Quality Control									9-88

130	Chemical Conversion Coat per QSI005 4.1	0.00							
130									
HandFinish	Memo	0.00				12	0	15-5-15	
Hand Finishing									

140	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
140									
Powdercoat	Memo	0.00				12	0	15-5-19	888
Powder Coating									

M/3/545.
 MASK PRIOR TO POWDER COAT
 PER ATTACHED PRELIM DWG-
 START TIME: 1:30
 OVEN TEMPERATURE: 300°
 FINISH TIME: 2:00

Work Order ID 129066

129066

Page 3

Wednesday, January 28, 2015 9:06:10 AM

Item ID: D3884-1 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Saddle, Inboard LH
 Start Date: 1/28/2015 Start Qty: 8.00 *8* Cust Item ID:
 Required Date: 1/28/2015 Req'd Qty: 8.00 *8* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC3- Inspect Part Finish	0.00							
150						(12)			DAS 38 9-89
QC	Memo	0.00							MAY 20 2015 as per Reuc
Quality Control									
160	Identify as per dwg & Stock Location: <u>st 404</u>	0.00							
160						12			DAS 27 9-89
Packaging	Memo	0.00							MAY 21 2015
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							MAY 22 2015
Quality Control									

POSITIVE RECALL

EFFECTIVE 15-5-27 AUTH 15-5-27
 RELEASED 9-89 DATE 15-05-22

Reuc

(15-5-20)

Picklist Print

Wednesday, January 28, 2015 9:06:13 AM

Page 1

Work Order ID: 129066

129066

Parent Item: D3884-1

D3884-1

Parent Item Name: Saddle, Inboard LH

Start Date: 1/28/2015

Required Date: 1/28/2015

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-017		Manufactured	No				Each	10.0000		8			

D6101-017

Saddle Billet

Location

Loc Qty

Loc Code

MAT040

10

124346

10

129915

12

JFL 2015-04-19

DART AEROSPACE LTD		Work Order:	129006
Description: Saddle, Inboard, LH		Part Number:	D3884-1
Inspection Dwg: D3884	Rev. B	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658	3.95	0.645	0.645	0.648	0.645		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		0.257	0.257	0.257	0.257		
F	0.605	0.625	4.805	0.615	0.615	0.615	0.615		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.0028	2.0028	2.003	2.003		
J	0.140	0.175		0.141	0.142	0.149	0.143		
K	1.265	1.285		1.2678	1.267	1.268	1.268		
L	0.115	0.135		0.126	0.126	0.125	0.125		
M	0.240	0.260		0.250	0.249	0.251	0.250		
N	0.110	0.140		0.135	0.135	0.137	0.135		
O	0.240	0.260		0.250	0.251	0.251	0.251		
P	2.826	2.886		2.856	2.856	2.856	2.856		
Q	0.178	0.198		0.188	0.188	0.188	0.188		
R	0.140	0.165		0.155	0.154	0.155	0.154		
S	0.720	0.780		0.760	0.760	0.760	0.760		
T	1.220	1.280		1.260	1.255	1.250	1.252		
U	1.245	1.255		1.250	1.250	1.250	1.250		
V	5.990	6.010		6.000	6.000	5.999	5.999		
W	2.495	2.505		2.500	2.500	2.500	2.500		
X	0.490	0.510	3.435	0.500	0.498	0.4985	0.4965		
Y	0.020	0.040		0.030	0.030	0.030	0.030		
Z	0.313	0.318		0.313	0.313	0.313	0.313		
AA	0.760	0.765		0.760	0.760	0.760	0.760		
AB	0.215	0.220		0.219	0.219	0.219	0.219		
AC	0.316	0.321		0.316	0.316	0.316	0.316		
AD	1.745	1.755		1.750	1.750	1.750	1.750		
AE	0.990	1.010	3.435	0.9985	0.997	0.997	0.999		
AF									
Accept/Reject									

Measured by:	150421
Date:	

Audited by:	J. A.	DAS
Date:	15/04/28	08
		9-09

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	

DART AEROSPACE LTD		Work Order:	129066
Description: Saddle, Inboard, LH		Part Number:	D3884-1
Inspection Dwg: D3884	Rev. B	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				15	26	27	28		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658	5/98	0.650	0.650	0.6495	0.651		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		0.257	0.257	0.257	0.257		
F	0.605	0.625	4/865	0.616	0.617	0.6165	0.6165		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.003	2.0044	2.005	2.0045		
J	0.140	0.175		0.145	0.143	0.143	0.143		
K	1.265	1.285		1.268	1.2694	1.2707	1.2695		
L	0.115	0.135		0.126	0.126	0.125	0.125		
M	0.240	0.260		0.251	0.251	0.251	0.250		
N	0.110	0.140		0.130	0.136	0.135	0.137		
O	0.240	0.260		0.250	0.250	0.247	0.247		
P	2.826	2.886		2.856	2.856	2.856	2.856		
Q	0.178	0.198		0.188	0.188	0.188	0.188		
R	0.140	0.165		0.155	0.156	0.153	0.155		
S	0.720	0.780		0.760	0.760	0.760	0.760		
T	1.220	1.280		1.257	1.252	1.249	1.249		
U	1.245	1.255		1.250	1.250	1.250	1.250		
V	5.990	6.010		5.999	5.999	5.998	5.998		
W	2.495	2.505		2.500	2.500	2.500	2.500		
X	0.490	0.510	3/4/35	0.4985	0.4985	0.497	0.498		
Y	0.020	0.040		0.030	0.030	0.030	0.030		
Z	0.313	0.318		0.313	0.313	0.313	0.313		
AA	0.760	0.765		0.760	0.760	0.760	0.760		
AB	0.215	0.220		0.219	0.219	0.219	0.219		
AC	0.316	0.321		0.316	0.316	0.316	0.316		
AD	1.745	1.755		1.750	1.750	1.750	1.750		
AE	0.990	1.010	8/42	0.998	0.998	0.998	0.998		
AF									
Accept/Reject									

Measured by:	150422 JFC
Date:	2015-04-23

Audited by:	J.A.	DAS
Date:	15/04/28	CS

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	

DART AEROSPACE LTD		Work Order:	129 066
Description: Saddle, Inboard, LH		Part Number:	D3884-1
Inspection Dwg: D3884	Rev. B	Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				X9	210	211	412		
A	2.870	2.880		2.875	2.875	2.875	2.875		
B	1.433	1.443		1.438	1.438	1.438	1.438		
C	0.638	0.658	8185	0.649	0.649	0.649	0.649		
D	3.895	3.905		3.900	3.900	3.900	3.900		
E	0.257	0.262		.257	.257	.257	.257		
F	0.605	0.625	4865	0.616	0.616	0.614	0.615		
G	1.120	1.130		1.125	1.125	1.125	1.125		
H	2.245	2.255		2.250	2.250	2.250	2.250		
I	2.000	2.020		2.0044	2.0044	2.0048	2.0048		
J	0.140	0.175		0.145	0.146	0.150	0.146		
K	1.265	1.285		1.2694	1.2694	1.2698	1.2698		
L	0.115	0.135		.125	.125	0.125	0.125		
M	0.240	0.260		.250	.250	0.250	0.250		
N	0.110	0.140		0.138	0.138	0.138	0.138		
O	0.240	0.260		0.247	0.252	0.252	0.252		
P	2.826	2.886		2.856	2.856	2.856	2.856		
Q	0.178	0.198		.188	.188	.188	.188		
R	0.140	0.165		0.150	0.152	0.152	0.151		
S	0.720	0.780		.760	.760	.760	.760		
T	1.220	1.280		1.249	1.249	1.249	1.249		
U	1.245	1.255		1.250	1.250	1.250	1.250		
V	5.990	6.010		6.002	6.002	6.002	6.002		
W	2.495	2.505		2.500	2.500	2.500	2.500		
X	0.490	0.510	3435	0.497	0.497	0.498	0.498		
Y	0.020	0.040		.030	.030	.030	.030		
Z	0.313	0.318		.313	.313	.313	.313		
AA	0.760	0.765		.760	.760	.760	.760		
AB	0.215	0.220		0.219	0.219	0.219	0.219		
AC	0.316	0.321		.316	.316	.316	.316		
AD	1.745	1.755		1.750	1.750	1.750	1.750		
AE	0.990	1.010	842	1.003	1.002	1.002	1.002		
AF									
Accept/Reject									

Measured by:	JFL
Date:	2015-01-23

Audited by:	DAS
Date:	15/04/28

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	

DQA: _____ Date: _____

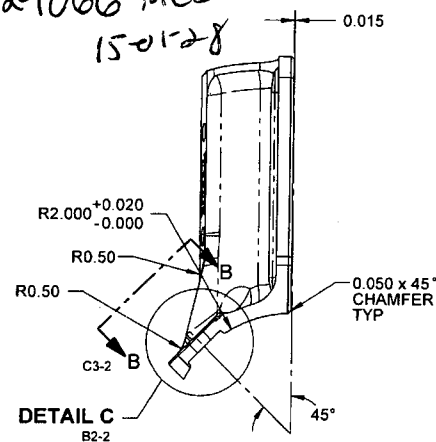
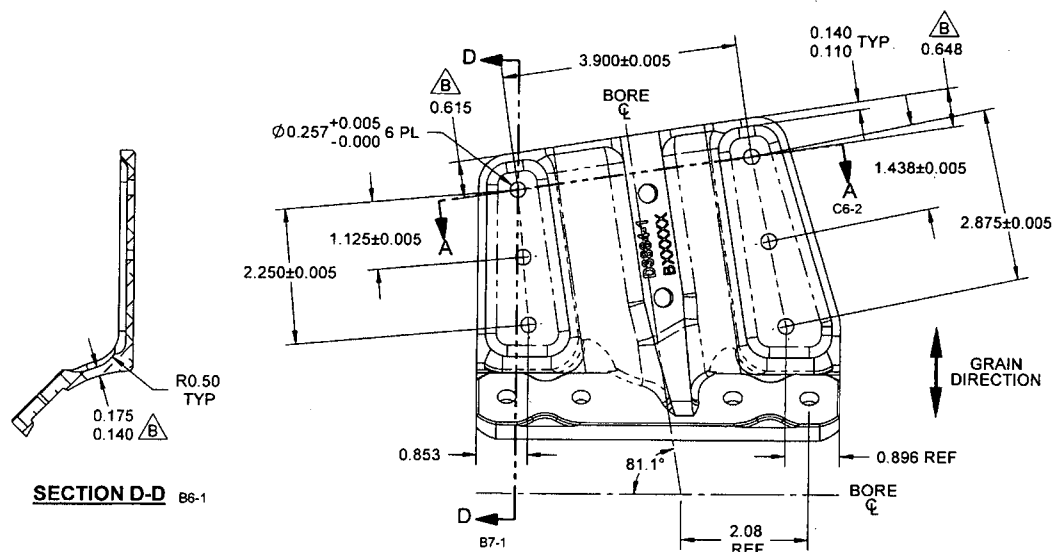


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

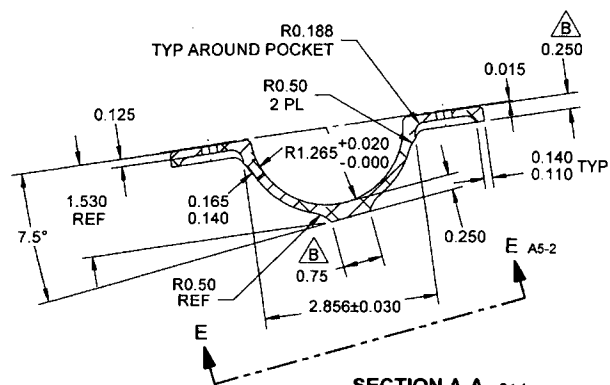


RELEASED
01/17/15

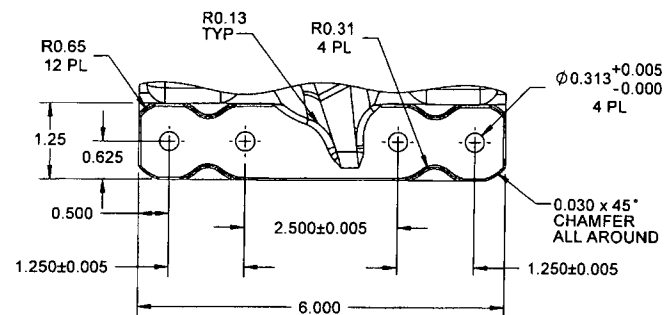
SECTION D-D B6-1

- NOTES:**
- (B)** 1) MATERIAL: 7075-T7351 ALUMINUM PER QQ-A-250/12 OR AMS-QQ-A-250/12 OR AMS-QQ-A-250/12 (REF DART SPEC. D6101-017)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO
MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 0.71 lbs

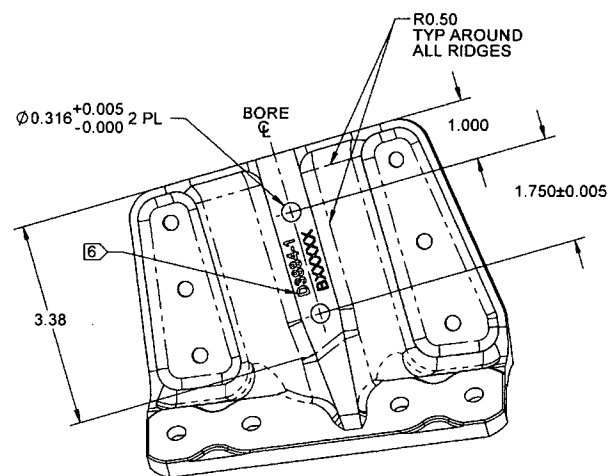
B	D6101-017 WAS D6102-017. ZN A6-1; ADD NOTE. ZN C4-2; ADD RD.037-1. ZN C2-2; INCREASED TOLERANCE 0.175 WAS 0.165, Z.087-1; ADD 0.615. ZN C8-1; ADD 0.848. ZN C4-1; ADD 0.250. ZN D6-2; ADD 0.060. ZN C2-2; 0.75 WAS 0.65. ZN D7-2.		RF	09.06.30
A	NEW ISSUE		RF	09.03.30
REV.	DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC. PORT HADLOCK, WA		
DRAWN	RF			
CHECKED	<i>PH</i>	DRAWING NO.	REV.	
MFG. APPR.	<i>[Signature]</i>	D3884		SHEET 1 OF
APPROVED	<i>[Signature]</i>	TITLE	SCALE	
DE APPR.	<i>[Signature]</i>	INBOARD SADDLE		NT
DATE	09.06.30			



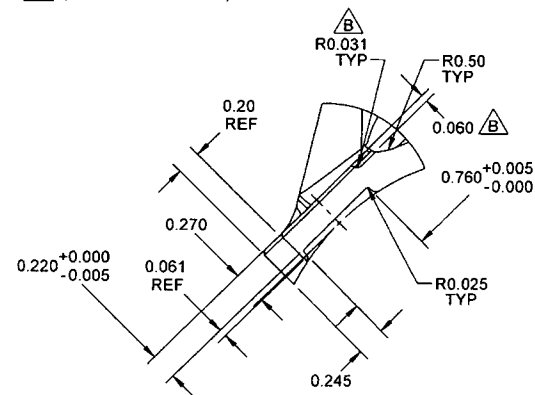
SECTION A-A C4-1



VIEW B-B B3-1
(ROTATED FOR CLARITY)



VIEW E-E C6-2



DETAIL C B3-1
SCALE 2X

RELEASED
09/07/15

DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	RF	PORT HADLOCK, WA	
CHECKED	RF	DRAWING NO. D3884	REV. B
MFG. APPR.		TITLE	SHEET 2 OF 2
APPROVED		INBOARD SADDLE	SCALE
DE APPR.			NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



Part Number: D3884-1	Rev: B	- Page 1 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
A	2.875	0.005 -0.005	2.876	2.876	2.876	2.876	
B	1.438	0.005 -0.005	1.438	1.438	1.438	1.438	
C	0.648	0.010 -0.010	0.653	0.653	0.652	0.652	
D	3.900	0.005 -0.005	3.899	3.900	3.899	3.899	
E	0.2570	0.0050 0.0000	0.2596	0.2590	0.2595	0.2597	
F	0.615	0.010 -0.010	0.619	0.619	0.618	0.618	
G	1.125	0.005 -0.005	1.125	1.126	1.126	1.126	
H	2.250	0.005 -0.005	2.251	2.252	2.251	2.251	
I	2.000	0.020 0.000	2.003	2.002	2.003	2.003	
J	0.140	0.035 0.000	0.141	0.152	0.149	0.143	
K	1.265	0.020 0.000	1.268	1.267	1.268	1.268	
L	0.125	0.010 -0.010	0.125	0.125	0.125	0.127	
M	0.250	0.010 -0.010	0.248	0.249	0.249	0.250	
N	0.125	0.015 -0.015	0.135	0.135	0.137	0.135	
O	0.250	0.010 -0.010	0.250	0.251	0.251	0.251	
P	2.856	0.030 -0.030	2.855	2.855	2.855	2.855	
Q	0.188	0.010 -0.010	0.194	0.192	0.193	0.196	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:



Part Number: D3884-1	Rev: B	- Page 2 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_1 Actual	No. Piece_2 Actual	No. Piece_3 Actual	No. Piece_4 Actual	
R	0.140	0.025 0.000	0.155	0.154	0.155	0.154	
S	0.750	0.030 -0.030	0.760	0.760	0.760	0.760	
T	1.250	0.030 -0.030	1.260	1.255	1.250	1.252	
U	1.250	0.005 -0.005	1.250	1.249	1.250	1.249	
V	6.000	0.010 -0.010	5.998	5.997	5.998	5.998	
W	2.500	0.005 -0.005	2.499	2.500	2.500	2.500	
X	0.500	0.010 -0.010	0.498	0.500	0.499	0.498	
Y	0.030	0.010 -0.010	0.030	0.030	0.030	0.030	
Z	0.3130	0.0050 0.0000	0.3142	0.3140	0.3145	0.3144	
AA	0.760	0.005 0.000	0.760	0.760	0.760	0.760	
AB	0.220	0.000 -0.005	0.219	0.219	0.219	0.219	
AC	0.3160	0.0050 -0.001	0.3154	0.3159	0.3160	0.3159	
AD	1.750	0.005 -0.005	1.749	1.748	1.750	1.750	
AE	1.000	0.010 -0.010	0.994	0.995	0.993	0.992	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:



Part Number: D3884-1	Rev: B	- Page 1 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_5 Actual	No. Piece_6 Actual	No. Piece_7 Actual	No. Piece_8 Actual	
A	2.875	0.005 -0.005	2.876	2.876	2.876	2.876	
B	1.438	0.005 -0.005	1.438	1.438	1.439	1.438	
C	0.648	0.010 -0.010	0.653	0.653	0.654	0.654	
D	3.900	0.005 -0.005	3.899	3.899	3.899	3.899	
E	0.2570	0.0050 0.0000	0.2597	0.2579	0.2595	0.2592	
F	0.615	0.010 -0.010	0.619	0.618	0.619	0.619	
G	1.125	0.005 -0.005	1.125	1.127	1.125	1.125	
H	2.250	0.005 -0.005	2.251	2.252	2.251	2.251	
I	2.000	0.020 0.000	2.003	2.004	2.005	2.005	
J	0.140	0.035 0.000	0.145	0.143	0.143	0.143	
K	1.265	0.020 0.000	1.268	1.269	1.271	1.270	
L	0.125	0.010 -0.010	0.126	0.125	0.124	0.126	
M	0.250	0.010 -0.010	0.250	0.249	0.248	0.249	
N	0.125	0.015 -0.015	0.130	0.138	0.135	0.137	
O	0.250	0.010 -0.010	0.250	0.250	0.247	0.247	
P	2.856	0.030 -0.030	2.855	2.855	2.855	2.860	
Q	0.188	0.010 -0.010	0.193	0.193	0.193	0.194	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:



Part Number: D3884-1	Rev: B	- Page 2 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_5 Actual	No. Piece_6 Actual	No. Piece_7 Actual	No. Piece_8 Actual	
R	0.140	0.025 0.000	0.155	0.156	0.153	0.155	
S	0.750	0.030 -0.030	0.760	0.760	0.760	0.760	
T	1.250	0.030 -0.030	1.251	1.252	1.249	1.249	
U	1.250	0.005 -0.005	1.250	1.249	1.250	1.250	
V	6.000	0.010 -0.010	5.998	5.998	5.998	5.998	
W	2.500	0.005 -0.005	2.499	2.500	2.500	2.500	
X	0.500	0.010 -0.010	0.499	0.499	0.497	0.498	
Y	0.030	0.010 -0.010	0.030	0.030	0.030	0.030	
Z	0.3130	0.0050 0.0000	0.3144	0.3137	0.3134	0.3137	
AA	0.760	0.005 0.000	0.760	0.760	0.760	0.760	
AB	0.220	0.000 -0.005	0.219	0.219	0.219	0.219	
AC	0.3160	0.0050 -0.001	0.3157	0.3162	0.3150	0.3150	
AD	1.750	0.005 -0.005	1.750	1.748	1.749	1.750	
AE	1.000	0.010 -0.010	0.993	0.995	0.993	0.993	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:



Part Number: D3884-1	Rev: B	- Page 1 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_10 Actual	No. Piece_11 Actual	No. Piece_12 Actual	No. Piece_9 Actual	
A	2.875	0.005 -0.005	2.877	2.876	2.876	2.876	
B	1.438	0.005 -0.005	1.439	1.439	1.437	1.438	
C	0.648	0.010 -0.010	0.652	0.654	0.653	0.652	
D	3.900	0.005 -0.005	3.899	3.899	3.899	3.899	
E	0.2570	0.0050 0.0000	0.2589	0.2588	0.2590	0.2591	
F	0.615	0.010 -0.010	0.619	0.620	0.620	0.618	
G	1.125	0.005 -0.005	1.125	1.125	1.125	1.126	
H	2.250	0.005 -0.005	2.251	2.251	2.250	2.251	
I	2.000	0.020 0.000	2.005	2.005	2.005	2.004	
J	0.140	0.035 0.000	0.150	0.150	0.146	0.145	
K	1.265	0.020 0.000	1.270	1.270	1.270	1.269	
L	0.125	0.010 -0.010	0.125	0.125	0.124	0.125	
M	0.250	0.010 -0.010	0.249	0.248	0.248	0.248	
N	0.125	0.015 -0.015	0.138	0.138	0.138	0.138	
O	0.250	0.010 -0.010	0.252	0.252	0.252	0.247	
P	2.856	0.030 -0.030	2.855	2.855	2.855	2.855	
Q	0.188	0.010 -0.010	0.193	0.191	0.195	0.194	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:



Part Number: D3884-1	Rev: B	- Page 2 -
Description: INBOARD SADDLE	Inspection Dwg: D3884	Work Order: 129066

Name	Nominal	Upper Tol Lower Tol	No. Piece_10 Actual	No. Piece_11 Actual	No. Piece_12 Actual	No. Piece_9 Actual	
R	0.140	0.025 0.000	0.152	0.152	0.151	0.150	
S	0.750	0.030 -0.030	0.760	0.760	0.760	0.760	
T	1.250	0.030 -0.030	1.249	1.249	1.249	1.249	
U	1.250	0.005 -0.005	1.249	1.249	1.250	1.250	
V	6.000	0.010 -0.010	5.998	5.998	5.998	5.998	
W	2.500	0.005 -0.005	2.500	2.500	2.500	2.500	
X	0.500	0.010 -0.010	0.499	0.499	0.499	0.497	
Y	0.030	0.010 -0.010	0.030	0.030	0.030	0.030	
Z	0.3130	0.0050 0.0000	0.3130	0.3135	0.3141	0.3139	
AA	0.760	0.005 0.000	0.760	0.760	0.760	0.760	
AB	0.220	0.000 -0.005	0.219	0.219	0.219	0.219	
AC	0.3160	0.0050 -0.001	0.3150	0.3150	0.3150	0.3150	
AD	1.750	0.005 -0.005	1.747	1.749	1.749	1.749	
AE	1.000	0.010 -0.010	0.998	1.000	0.999	0.998	

Measured by:
Mathieu Lamarche

Date:
2015-5-10

Audited by:

Date:

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

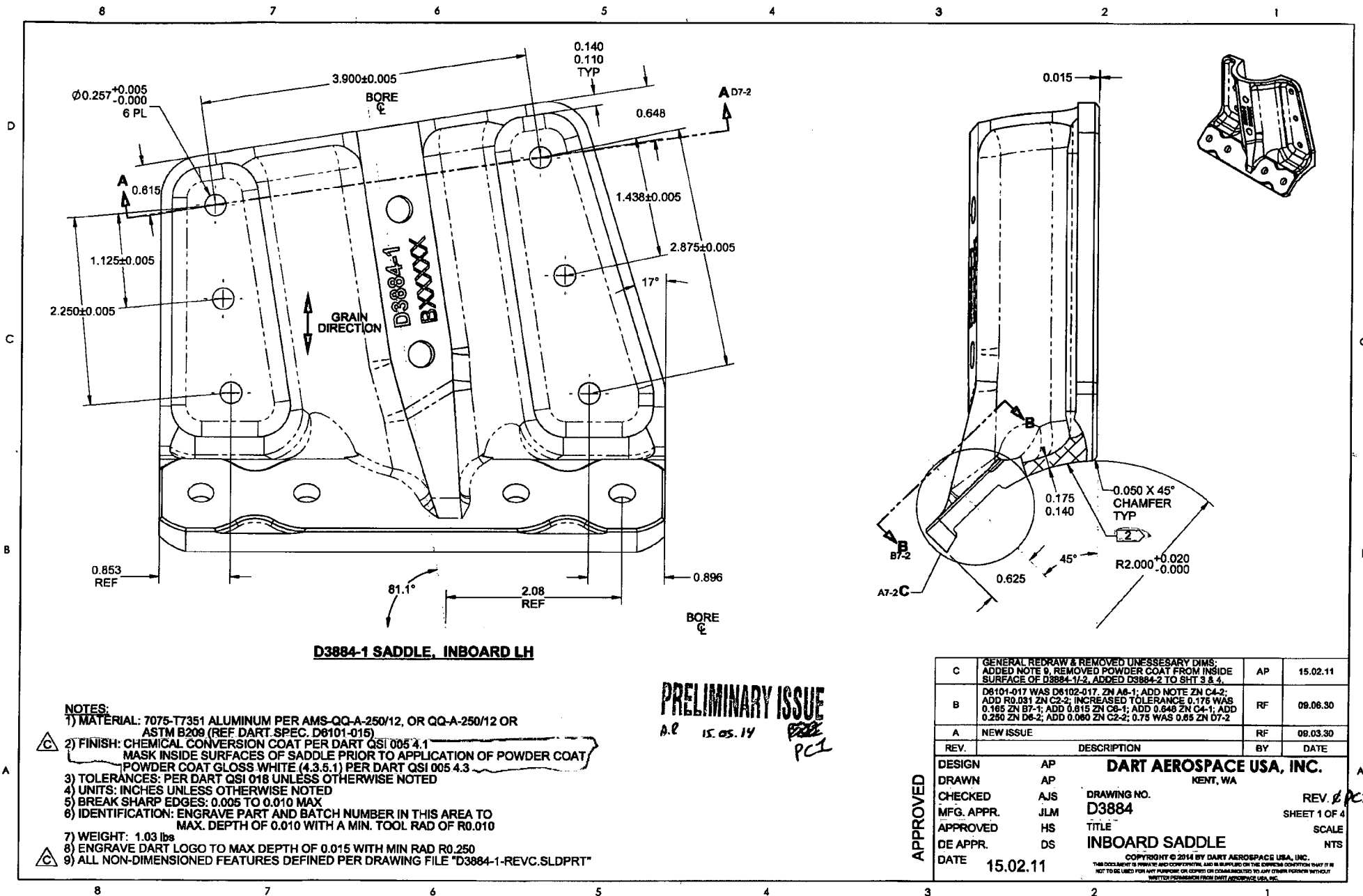
DQA: det Date: 15/06/05QA Closed: RM Date: 15/06/01

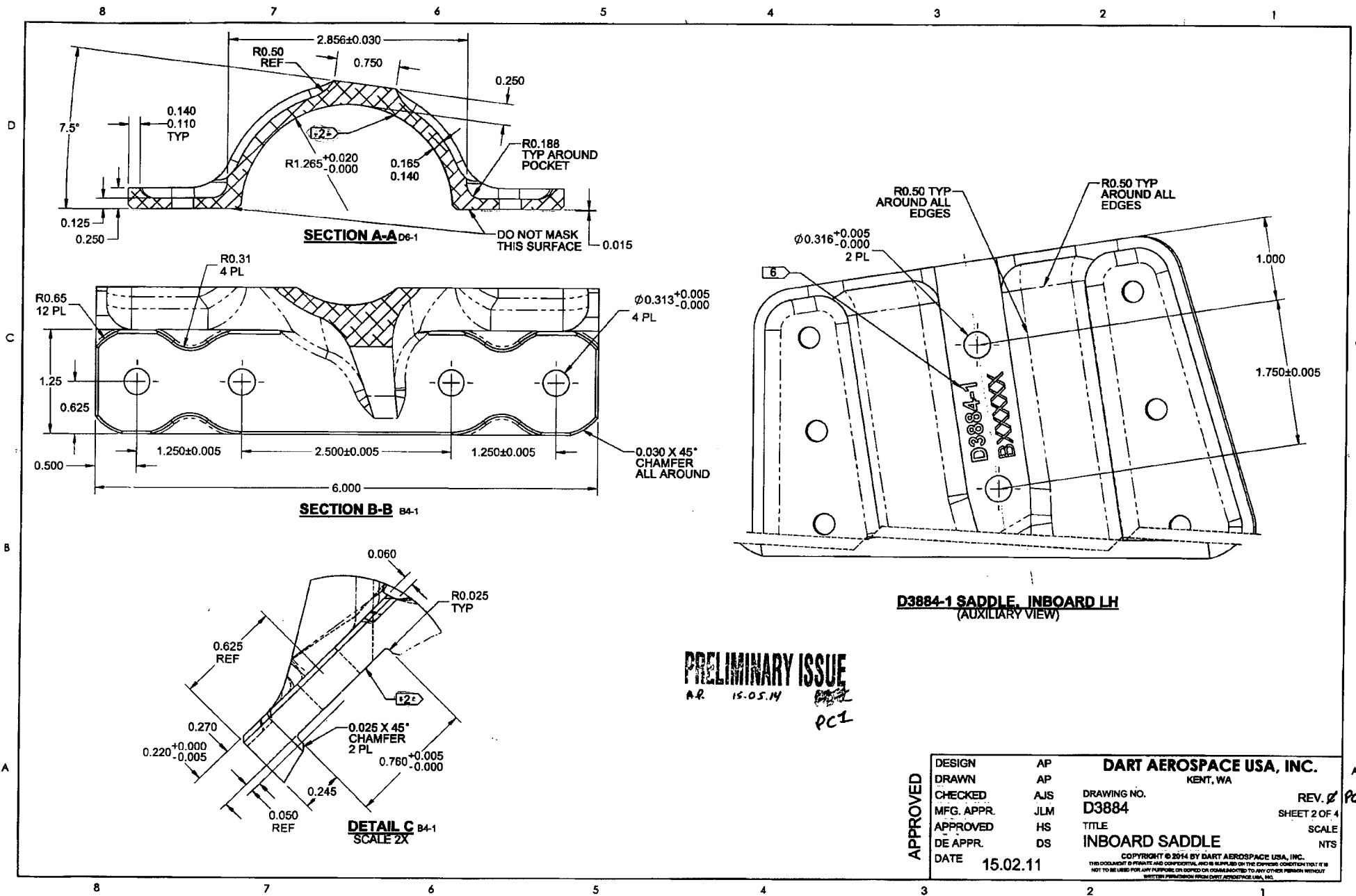
Work Order: <u>129 066</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Work Order Update ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D3884-1</u>		Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐	Crosstube ☐ Small Fab ☐ Finishing ☒ Composite ☐	Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐	Engineering ☒ Quality ☐ Other ☐
NCR No. <u>15-5042</u>					

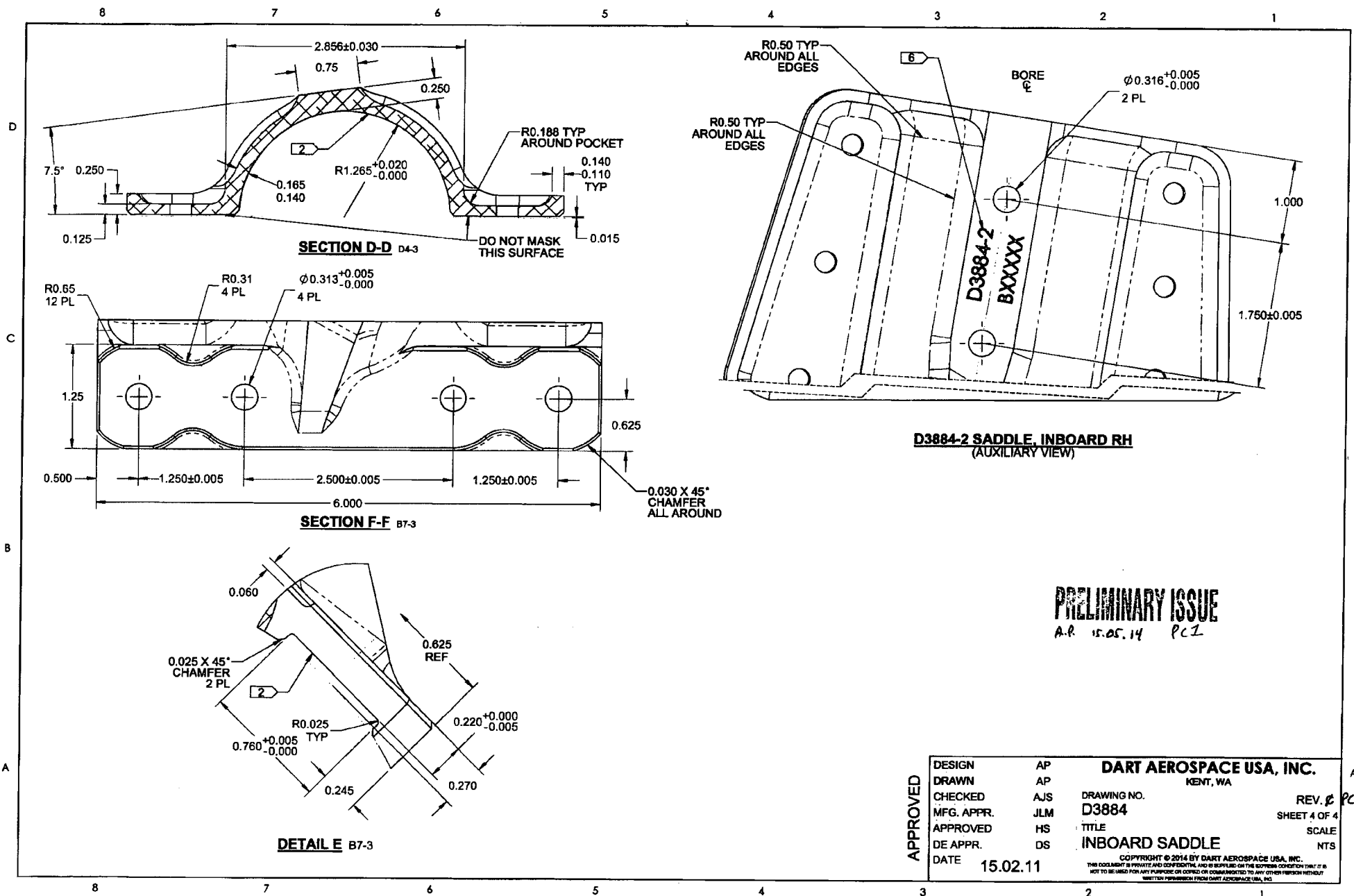
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data ☒	15.05.14	140	8	NO POWDER COAT ON CONCAVE SURFACES MATTEU WITH X-TUBE & SKIDS	A.P. 15.04.14	ACCEPTABLE PER ATTACHED PRELIM DWG	9 9 9 May 20	DAS 9 9-89 15.05.26	DAS 9 9-89 15.05.26
Equip/Tooling ☐									
Operator ☐									
Material ☐									
Setup ☐									
Other ☐									
Process ☐									
Supplier ☐									
Training ☐									
Unapproved ☐									

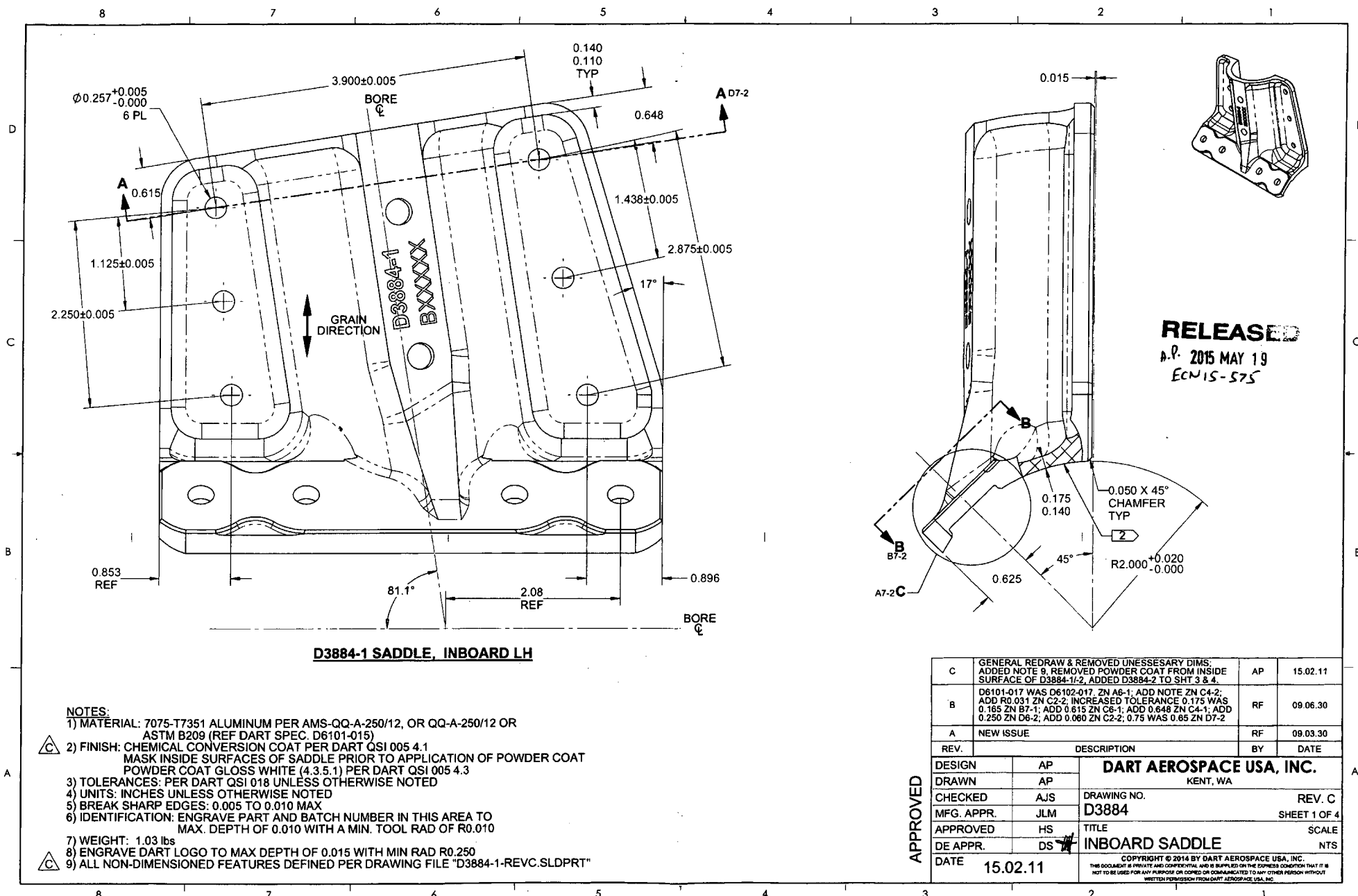
FAULT CATEGORY

Landing Gear	General	
☐ Bending	☐ Bend	☐ Grain
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete
☐ Crushed/Crimped.	☐ Burrs	☐ Instructions Incomplete/Unclear
☐ Cuffs	☐ Contamination	☐ Maintenance
☐ Heat Treat	☐ Countersink	☐ Mislabelled
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread
☐ Ripples in Bend	☒ Drill Holes	☐ Offset
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration
☐ Turning Sequence	☐ Finish	☐ Out of Sequence
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions
		☐ Ovalized ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☒ Other









RELEASED
A.P. 2015 MAY 19
ECN15-575

D3884-1 SADDLE, INBOARD LH

NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM PER AMS-QQ-A-250/12, OR QQ-A-250/12 OR ASTM B209 (REF DART SPEC. D6101-015)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO
MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 1.03 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD R0.250
- 9) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D3884-1-REVC.SLDPRT"

C	GENERAL REDRAW & REMOVED UNNECESSARY DIMS; ADDED NOTE 9, REMOVED POWDER COAT FROM INSIDE SURFACE OF D3884-1/2, ADDED D3884-2 TO SHT 3 & 4.	AP	15.02.11
B	D6101-017 WAS D6102-017. ZN A6-1; ADD NOTE ZN C4-2; ADD R0.031 ZN C2-2; INCREASED TOLERANCE 0.175 WAS 0.185 ZN B7-1; ADD 0.615 ZN C6-1; ADD 0.250 ZN D6-2; ADD 0.060 ZN C2-2; 0.75 WAS 0.65 ZN D7-2	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AP		
CHECKED	AJS	DRAWING NO.	REV. C
MFG. APPR.	JLM	D3884	SHEET 1 OF 4
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	INBOARD SADDLE	NTS
DATE	15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____

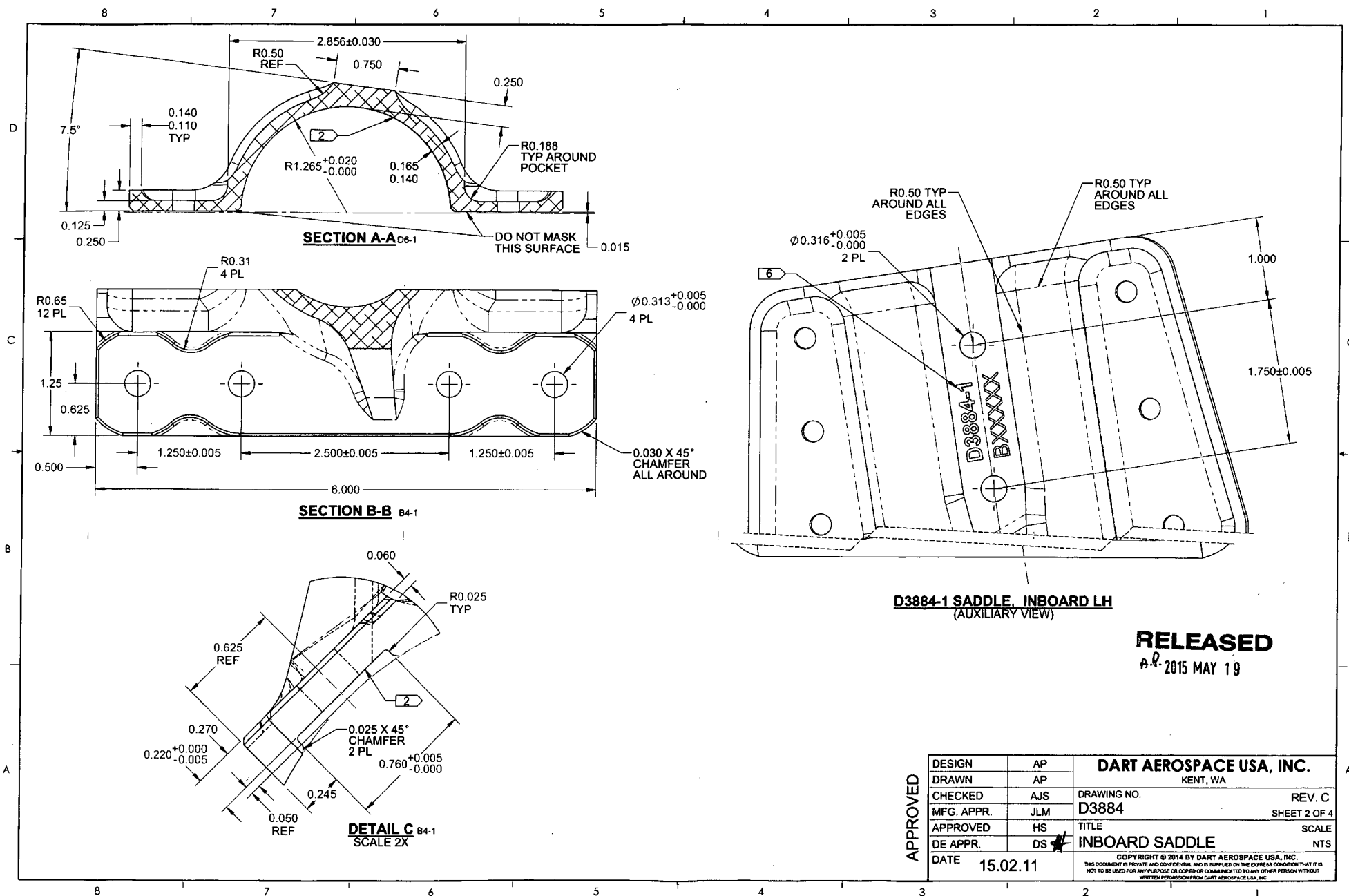


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



APPROVED	DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. C
	MFG. APPR.	JLM	D3884	SHEET 2 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	INBOARD SADDLE	NTS
	DATE	15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



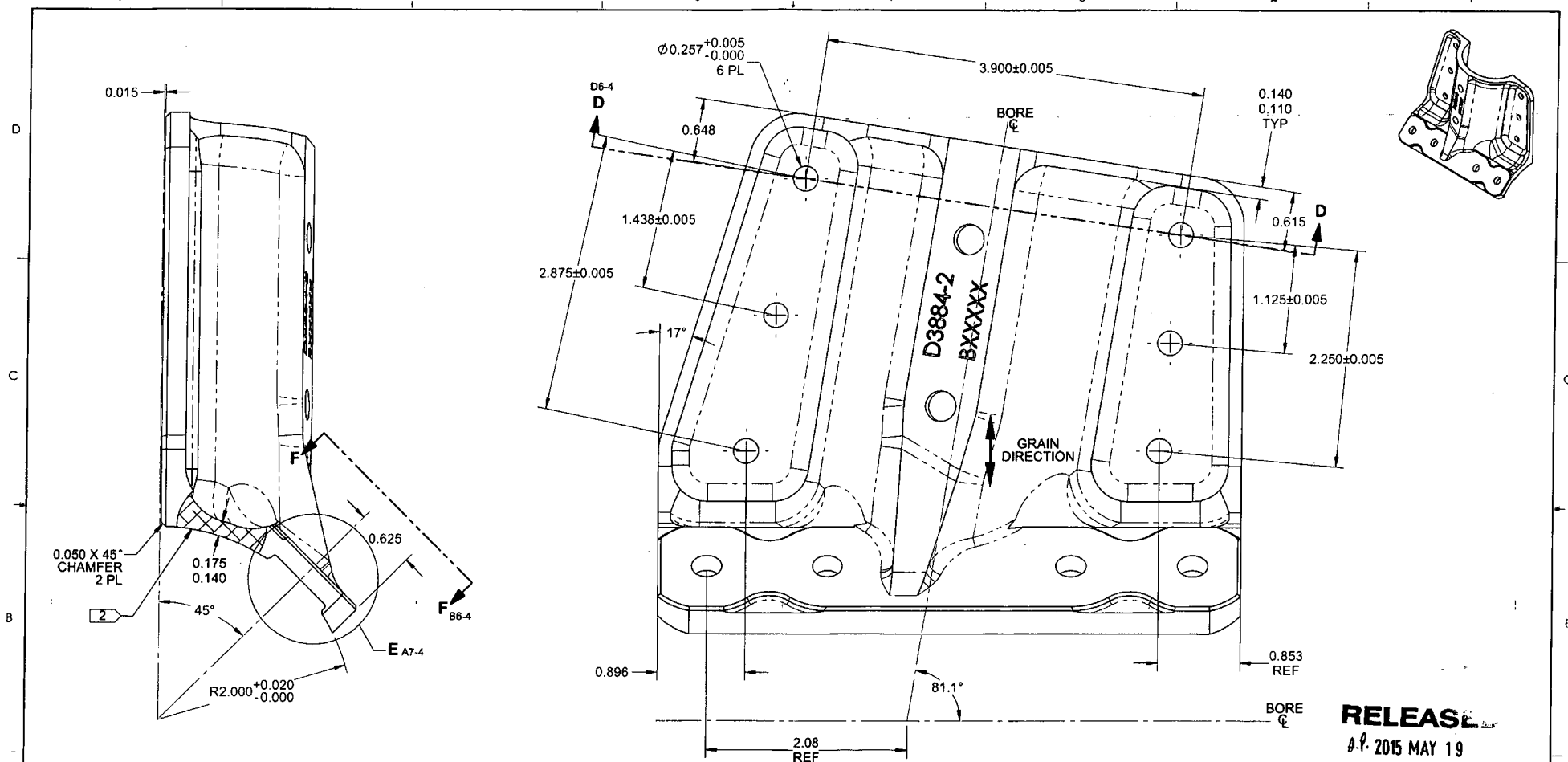
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 																		
Description Work Order Deviation				Disposition																					
							Completed By																		
							Lead hand / Supervisor Approval Verification																		
							QC / QA Coordinator Approval																		

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						



D3884-2 SADDLE, INBOARD RH

NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM PER AMS-QQ-A-250/12, OR QQ-A-250/12 OR ASTM B209 (REF DART SPEC. D6101-015)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
MASK INSIDE SURFACES OF SADDLE PRIOR TO APPLICATION OF POWDER COAT
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 1.03 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD R0.250
- 9) ALL NON-DIMENSIONED FEATURES DEFINED PER DRAWING FILE "D3884-2-REVC.SLDPRT"

APPROVED	DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
	DRAWN	AP		
	CHECKED	AJS	DRAWING NO.	REV. C
	MFG. APPR.	JLM	D3884	SHEET 3 OF 4
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	INBOARD SADDLE	NTS
DATE		15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASE
A.P. 2015 MAY 19

DQA: _____ Date: _____

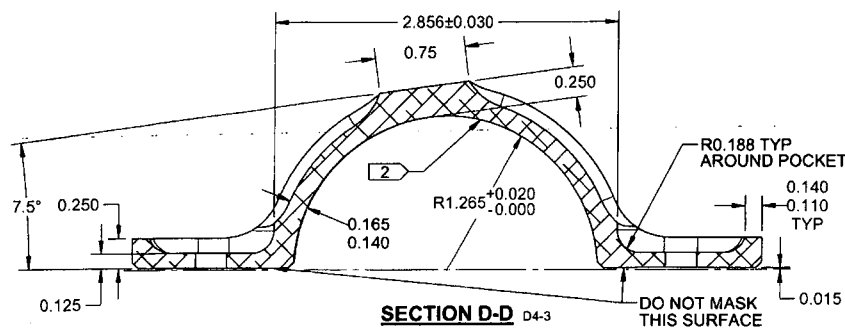


WORK ORDER NON-CONFORMANCE / UPDATE

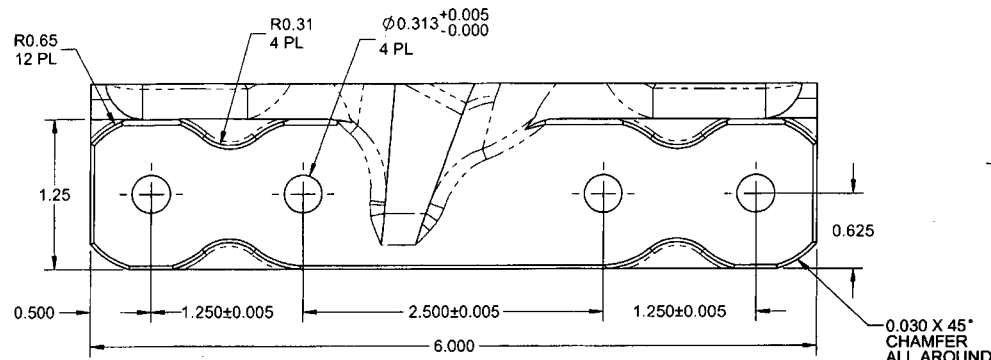
QA Closed: _____ Date: _____

Work Order update only ☐

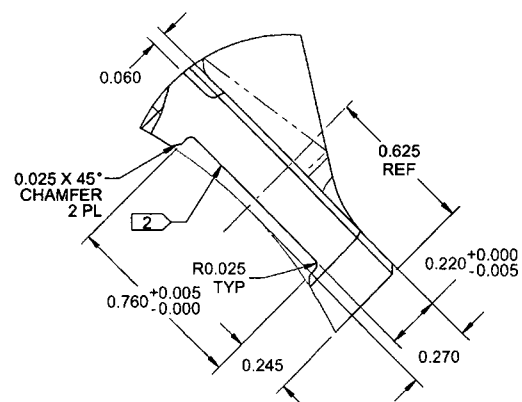
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					



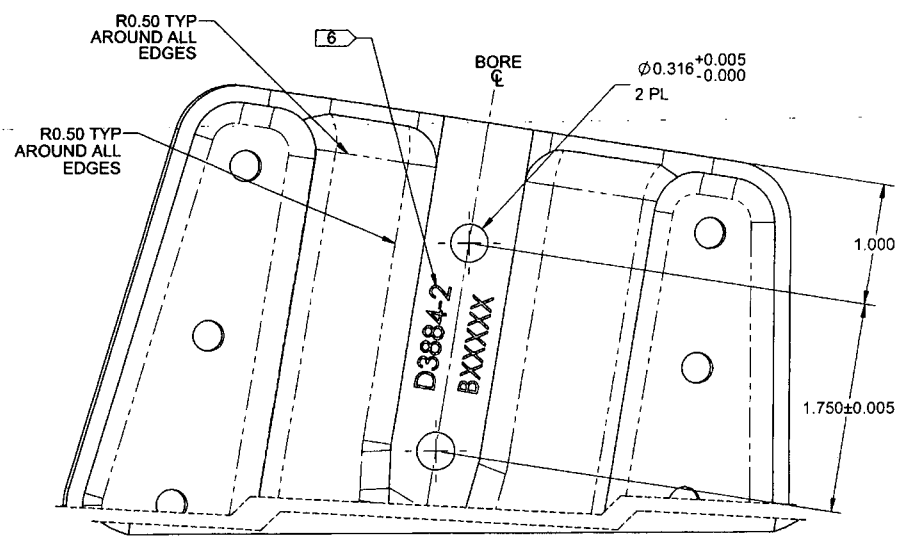
SECTION D-D D4-3



SECTION F-F B7-3



DETAIL E B7-3



D3884-2 SADDLE, INBOARD RH
(AUXILIARY VIEW)

RELEASED
A.P. 2015 MAY 19

APPROVED	DESIGN	AP	DART AEROSPACE USA, INC.	
	DRAWN	AP	KENT, WA	
	CHECKED	AJS	DRAWING NO. D3884	REV. C
	MFG. APPR.	JLM	SHEET 4 OF 4	
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	INBOARD SADDLE	NTS
	DATE	15.02.11	COPYRIGHT © 2014 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					